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# SCIENCE.

FRIDAY, OCTOBER 15, 1886.

## COMMENT AND CRITICISM.

SCHOOLS FOR THE TRAINING of nurses are being organized in every city, and the value of such skilled help is being more and more appreciated by the physician, who, in his busy professional life, cannot make the observations as to the temperature, pulse, and respiration of his patient as often as he would like, or as the welfare of the patient demands. In all these methods, nurses are now trained, and their services are well-nigh indispensable. A trained nurse is, however, an expensive luxury, three dollars a day being the usual price paid them; so that only the rich can enjoy their educated aid. What is greatly needed in our cities is an organization which will supply such succor to the poor, by whom such services are in reality more needed than by the rich. Every physician whose practice has taken him into tenement-houses has felt the great need of some one to nurse his patients, when, through ignorance or poverty, neither they nor their friends can do any thing to aid him. In Philadelphia a district nurse society has been formed for the care of the sick poor who cannot be sent to the hospital. A trained nurse is provided by this society to visit and attend the sick. Bed-linen and other necessities are also furnished. For these services a charge of five cents a day is made, except when the patient or his relatives cannot afford to pay any thing, in which case every thing is furnished without recompense. The motive which underlies this system is an admirable one, and we shall watch the working of the plan with great interest.

THE BEST METHOD for the disposal of garbage has been a subject of discussion among sanitarians for many years. There is no one system which is equally applicable to all places. In small villages it may with safety be utilized as food for hogs, if proper facilities for the keeping of these animals exist; but, where there is a population of any considerable magnitude, pig-keeping should be discouraged, and, if need be, prohibited. In small families the kitchen refuse can be burned in the range; but in large families, hotels and restaurants, this method of garbage disposal is usu-

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ally not feasible. Under such circumstances, it must be removed from the house; and this is properly the work of the municipal authorities. Boston has undoubtedly the best system for this purpose; but this is in a large measure due to the favorable construction of the city, by which each block or square is divided by an alley-way, into which the garbage-collector can go, and remove the refuse from the rear of the buildings, and thus avoid carrying the offensive material through the dwelling. In New York and Brooklyn such an arrangement of streets does not exist, and the garbage must therefore be brought through the hallways of the houses. In New York garbage and ashes are placed in the same receptacle, and removed together. In Brooklyn they are removed separately. One of the most disagreeable sights in these two cities is the long line of ash-barrels which line the streets on 'ash days.' Brooklyn is about to make this still more disagreeable by compelling the householder to place his garbage-vessel, usually a soap-box or a tin pan, on the sidewalk in front of his dwelling, there to remain until the proverbially dilatory 'swill-man' comes along to collect it. As this is to be done twice and three times a week, according to the season, the Brooklyn streets will be any thing but attractive to the foot-passenger. There can certainly be but one advantage claimed for this plan, and that is the reduced cost; but, unless we are much mistaken, the nuisance which will result will make a change imperative.

WE HAVE ALREADY REFERRED to the new objective invented by Professor Abbé of Jena. The German government appropriated fifteen thousand dollars for experimental purposes; and after five years of work, Professor Abbé produced this new objective, which, it is claimed, more perfectly corrects spherical and chromatic observation than any hitherto manufactured. Some of the lenses in the combination are of siliceous glass, while the others contain borax and phosphorus. The mechanical part of the work was done by Zeiss. We extract the following description of the objective from the *Journal de micrographie*, by Dr. van Heurck: "The objective is homogeneous immersion, of a focal distance of three millimetres,

or about one-eighth English measurement. It is not arranged for cover-glass correction, as this is not necessary, that function being obtained by means of the sliding tube of the body. It contains five lenses, and has a numerical aperture of 1.4, which is a trifle less than has been obtained in England and America (1.5); but, so far as its optical qualities are concerned, it is far superior to any thing ever before made, the new glass permitting the absolute correction of all aberrations. The field is perfectly flat, the minutest object in the extreme edge of the field showing as sharply and clearly as though it were in the centre. With the vertical illuminator, an amphibleura (silvered) is resolved into pearls, — not merely in spots, but over the entire frustule, — and with such clearness that these pearls can be counted. In the study of other diatoms, I have found details which have hitherto escaped notice. As to the bacteria, details of structure are shown that have never before been seen, — details that will without doubt serve to differentiate them by ocular means. Accompanying the objective are three eye-pieces, — two for direct use, and one for photography. They are also made of the new glass and by entirely new formulae."

THE HEALTH COMMISSIONER of Chicago has prohibited the removal of milk from the cow-stables of that city which are infected with contagious pleuro-pneumonia. As was to be expected, the owners rebel, and, unless closely watched, will doubtless smuggle the milk into the market. The New York health authorities are inspecting the beef which comes to the city from Chicago in refrigerator-cars. Thus far no unwholesome meat has been detected. This inspection is of value, as some carcasses may be so diseased as to be detected; but unless the inspection is made at the slaughter-houses, where the viscera can also be examined, no guaranty can be given that the meat is that of a healthy animal. The last report indicated that three thousand animals were under quarantine in Chicago.

THE RECENT DEATH of two persons in a New York hotel from the inhalation of illuminating-gas draws attention again to the dangers connected with this service. Just how the accident occurred has not yet been satisfactorily explained; but it is probable, that, as the victims were city residents, they did not resort to the method of extinguishing the light usually adopted by stran-

gers from the country, namely, by blowing it out. It is more than likely that the flame was a small one, which was either blown out by a current of air, or extinguished by a change of pressure within the pipes. In many occupied buildings the old-fashioned gas-cocks, those without stops, still exist; and it not infrequently happens, that, by an incomplete closure of the outlet, gas escapes into the room, sometimes to a dangerous degree. It would be a valuable improvement in the management of our cities and towns, if it was made the duty of some of the municipal departments to periodically inspect the gas pipes and fixtures of all buildings occupied as residences, with power to compel the owners to provide the most perfect apparatus, or, failing so to do, to be liable to a fine, which could be used by the authorities to do the necessary work themselves. In recent years valuable laws have been passed, regulating the construction and drainage of dwellings, and the same supervision could be advantageously exercised over the arrangement and quality of the gas-pipes and faucets.

#### THE GERMAN ASSOCIATION OF NATURALISTS AND PHYSICIANS.

THE meetings of the Association of German naturalists and physicians closed this afternoon, very successful according to German, but hardly so according to American notions. The association is a curiosity in itself: for although it now has held its fifty-ninth meeting, and has been in existence since 1822, it has no permanency whatever, but dissolves at the close of every meeting, after it has appointed a president, a vice-president, and a secretary for the next year, and has selected the next meeting-place, which must be the residence of the first and third officer. Into the hands of these gentlemen is given every thing pertaining to the following gathering, which always commences on Sept. 18. The Association of German naturalists and physicians has no corporate existence, owns no property whatever, and meets for the avowed purpose of facilitating acquaintances among the members. Scientific discussions are of secondary importance. For instance: that which a section apparently considers first is, "Where shall we drink our *Früh-schoppen*, and which shall be our *Stamm-kneipe*?" And in the 'Stamm-kneipe,' behind the beer-glass, discussions are held often more profound than those at the official meetings. The advocates of the often-quoted assertion that beer is always injurious will have to acknowledge themselves de-